

REMARKS

Claims 1-8 are currently pending in this case. These claims stand rejected under 35 U.S.C. §112, second paragraph as indefinite for use of allegedly unclear terms. Claims 1-8 also stand rejected under 35 U.S.C. §103(a), with claims 1 and 6-8 rejected as unpatentable over Haynes' Ford Taurus & Mercury Sable Taurus Repair Manual ("Haynes Taurus Manual") in view of U.S. Patent No. 6,119,060 to Takayama, *et al.* ("Takayama"), and claims 2-5 rejected as unpatentable over Haynes Taurus Manual and Takayama in further view of JP 64030856 (Japan Patent Publication No. 01030,856A) to Toshihiro, *et al.* ("Toshihiro").

The Applicants have carefully reviewed the August 26, 2002 Office Action, and respectfully submit the foregoing amendments and following remarks in response thereto. The Applicants have further amended claim 1 to more precisely recite the components which are centrally concentrated within the vehicle.

In view of the foregoing amendments and following remarks, the Applicants believe claims 1-8 are presently allowable, and respectfully request the pending rejections be reconsidered and withdrawn.

1. The § 112, Second Paragraph Rejections Should Be Reconsidered and Withdrawn.

The Applicants respectfully traverse the pending § 112, second paragraph, rejection of claims 1-8 as indefinite for failing to clearly define the terms "ABS actuator" and "junction box" on the grounds that these terms are fully and satisfactorily defined by the present specification and claims.

"ABS Actuator": The August 26, 2002 Office Action refers to the Amendment filed June 19, 2002 as essentially maintaining that the "ABS actuator" is a hydraulic component, not electrical equipment, and then notes that the claims do not reflect this distinction, *i.e.*, the claims refer to the ABS actuator as one of several pieces of electrical equipment and "do not limit the term "actuator" in any way that would exclude its interpretation as an electrical component, such as a computer control unit." August 26, 2002 Office Action at 2.

The Applicants respectfully submit that their June 19, 2002 remarks have been misinterpreted. The Applicants did not argue that the ABS actuator in the present invention consists solely of the hydraulic portions of an ABS system, did not suggest that an ABS actuator must exclude either electrical components (such as electric motors that drive hydraulic pumps) or electronic components (such as control circuits), nor suggest that the

ABS actuator excludes hydraulic elements. Indeed, such a position would be inconsistent with the teachings of the present specification, which describes and illustrates an ABS actuator with *both* electrical *and* hydraulic elements. For example, in Fig. 6, centrally located ABS actuator 28 is illustrated as having both electrical connections to the centrally-concentrated electrical components, and hydraulic connections via lines or pipes to the wheel cylinders. Application Fig. 6; 9:26-10:4 (describing the electrical and hydraulic connections in Fig. 6); *see also* 2:4-21 (ABS actuator identified as one of several “electrical equipments”); 3:20-27 (connections to other electrical equipments by wires, while ABS actuator connected with “wires or lines”).

In the Applicants’ June 19, 2002 remarks, rather than trying to distinguish between ABS actuators on the basis of whether they contain only hydraulics as the August 26, 2002 Office Action suggests, the Applicants were attempting to point out that the Haynes Subaru Legacy Manual does not teach or suggest an ABS actuator *in the dash area*. Thus, the Applicants were attempting to make clear that -- regardless of whether the Legacy actuator contained solely hydraulics or contained both hydraulics and electronics -- *the Legacy ABS actuator is never shown anywhere but at the forward outside corner of the Legacy’s engine compartment*, and therefore this reference did not teach or suggest the feature for which it was cited.

In view of the present specification’s teaching that an ABS actuator contains both hydraulic and electrical elements (a concept well understood by those of ordinary skill in the art, given the common construction of ABS actuators with hydraulic pumps driven by electric motors or with fast-acting electric solenoids which interrupt hydraulic pressure application), the Applicants respectfully submit that: (i) the term “ABS actuator” as used in the present claims is more than sufficiently definite, particularly in the context of the specification’s description of the present invention, (ii) the term, while entitled to a broad interpretation, cannot be interpreted so broadly as to include the Subaru Legacy’s purely electronic control circuits in the Legacy dashboard, and (iii) as noted in the June 26, 2002 Amendment, the Haynes Legacy Manual does not teach or suggest the location of an ABS actuator (with its hydraulic and electrical components) in the central region of a vehicle. Because the term ABS is not indefinite under §112, second paragraph, the Applicants respectfully request this portion of the §112 rejection be reconsidered and withdrawn.

Junction Box”: The August 26, 2002 Office Action objects to the reference to a “junction box” as an electrical equipment as unclear, and notes that the claims do not define the junction box as having structure that would include electronics. August 26, 2002 Office Action at 2.

The Applicants respectfully submit that when viewed in the context of the plain usage of this term in the specification, and the common knowledge possessed by those of skill in the art, the term “junction box” is well understood and more than adequately definite to provide a definite scope for the pending claims.

In the present specification, the Applicants repeatedly refer to the junction box as one of several “electrical equipments” that are centrally located in the present invention. Thus, the recitation of a junction box as one of the electrical equipments in the claims is entirely consistent with the specification and readily understandable to one of ordinary skill without further elaboration in the claims.

Moreover, as evidenced by references cited by the Examiner, it is well understood in the art that a junction box provides a facility for the location and connection of electrical components, such as wire connections, bus bars, relays, fuses, etc. Indeed, the concept that a junction box may be identified by this name and be well understood without further elaboration as to the electrical components held therein is demonstrated by several of the references the Examiner cited. For example, the Sekido reference (U.S. Patent No. 5,903,444) discloses a electrical junction box with *no* electrical or electronic structure definitions in its claims, just like the present invention. This reference in particular demonstrates that the understanding of what a junction box is in this context is sufficiently definite, as the Sekido case was allowed with claims directed only to the structural arrangements of the box (*i.e.*, without regard to, or further definition of, the electrical or electronic structures inside the box -- just as in the presently pending claims).

For the foregoing reasons, the Applicants respectfully submit that the term “junction box in this context is definite, as request this portion of the §112, second paragraph rejection be reconsidered and withdrawn.

Generally Centralized Region”: The Applicants respectfully submit that there is no need to define the location of the brake booster with any greater specificity in the claims.

Regardless of where the booster is located in the vehicle, the claim clearly defines the generally centralized region as ½ the distance in the vehicle width direction from the booster

to the vehicle centerline (on each side of the centerline). This definition is more than sufficient to set forth definite bounds to the claims, as it permits a potential infringer to readily and precisely determine whether their vehicle components are located within the centralized region -- a region whose size is determined by their own placement of their brake booster. Thus, contrary to the assertion in the August 26, 2002 Office Action, the Applicants maintain that the location of the electrical equipment is well defined in the claims, and that the claims are sufficiently definite in their current form.

Reconsideration and withdrawal of this remaining portion of the pending §112, second paragraph rejection is also respectfully requested.

2. Amended Claim 1 Is Patentable Under § 103(a) Over the Cited References.

The Applicants respectfully traverse the pending rejection of claims 1 and 6-8 as unpatentable under §103(a) over Haynes Taurus Manual in view of Takayama on the grounds that these references, either alone or in combination, do not teach or suggest the invention recited in amended claim 1.

As amended, claim 1 now recites that all of the following electrical equipments are centrally located: an engine control computer, a relay block, a junction box, and an ABS actuator.

The Applicants provide the following two arguments establishing that the present claims are patentable under § 103(a) over the cited references: (i) the references do not suggest the propositions for which they are cited; and (ii) the references do not suggest the concentration of electrical equipments in the manner taught by present invention and recited in amended claim 1.

a. There Is Nothing Which Suggests Modifying Or Combining the Haynes Taurus Manual With Any Other Reference to Obtain the Present Invention.

As a threshold matter, the Applicants respectfully maintain that the Examiner's reliance the Haynes Taurus Manual is misplaced, as this document appears to only serve as a catalog of parts, rather than providing any teaching or suggestion for any "concentration" of electrical components, or any suggestion for its modification or combination with any other reference to obtain the present invention's improved component location arrangements and associated cost savings.

The Applicants submit that the August 26, 2002 Office Action's characterization of the components as "concentrated within the vehicle" is an overstatement. August 26, 2002 Office Action at 4. In fact, the Taurus Manual teaches virtually all the cited components being located *away* from the vehicle's centerline. For example, from the list of components identified in the Office Action:

- the engine computer ("ECA") is disclosed as behind glove box and over recirculating duct, *i.e.*, nearly all the way to the outer right side of the dash;
- the cited "relay block" is not disclosed as located anywhere; in fact, there is no disclosure of *any* relay block (instead, it appears there is an unsupported assumption that because there are relays present -- somewhere in the car -- that the relays are in a relay box);
- the "junction box" (actually a fuse box for over-current protection in individual circuits, not a junction box, *i.e.*, a box in which different circuits are connected to one another) is shown in Taurus fig. 4.1 as directly next to the parking brake foot pedal mechanism, at the far left side of the vehicle;
- the ABS actuator location is not disclosed, however one of ordinary skill would recognize that these actuators are typically mounted on the outer periphery of the engine compartment (as shown in the Subaru Legacy Manual);
- the meter unit ("any instrument panel gauge") location is not disclosed, however one of ordinary skill would recognize that on the Taurus the instrument cluster is directly in line with the brake booster, and thus both offset to toward the outside of the dashboard and certainly not within the region defined by one-half the distance between the booster and the vehicle's centerline; and
- the "brake system" is similarly shown aligned with the brake booster, away from the center of the vehicle.

The Applicants' purpose in reciting the locations of the foregoing components is not to argue that the Haynes Taurus Manual does not disclose these components -- the Applicants readily acknowledge that virtually every car sold in the U.S. in the recent past contains these components.¹

¹ The Applicants further note that despite this nearly universal equipage, there has been no evidence cited to suggest that any manufacture has adopted the novel arrangements of the present invention in any of the tens of millions of vehicles produced in recent years. This strongly supports the Applicants' position that the present invention's arrangements were not obvious to those of ordinary skill in the art at the time of invention.

Instead, the Applicants have highlighted the wide dispersion of these components throughout the Taurus for the purpose of establishing that it is entirely inappropriate to cite this reference -- which teaches *completely* away from the present invention's component concentrations -- with the inherently implied assertion that there is "some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, *to modify the reference or to combine reference teachings*" to obtain the present invention. MPEP § 2142 (*citing In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Because the Haynes Taurus Manual contains *nothing* that suggests modification of its dispersed component arrangements or its combination with another reference to obtain the present invention, the Applicants maintain the pending § 103(a) rejection over this reference should be withdrawn.

b. Amended Claim 1 Is Not Taught Or Suggested By the References.

The August 26, 2002 Office Action cites the Haynes Taurus Manual as teaching a variety of components "concentrated within the vehicle body" (demonstrated above to be factually incorrect), but correctly acknowledges that this reference does not teach or suggest at least two of these components being located along the vehicle's centerline. August 26, 2002 Office Action at 3-4. The Office Action then asserts that Takayama teaches that it was well known in the art to concentrate electrical components along the centerline and on a dash cross member, and that it would have been obvious to concentrate components such as the engine control computer, ABS actuator or meter unit along the centerline.

Review of Takayama shows that this reference does not teach the mounting of items such as the engine control computer, ABS actuator or meter unit along the centerline, but instead discloses, at most, that *controls related to* these components may be located on the dash panel P and *connected to* these separately located electrical equipments (*i.e.*, without regard to where the equipments themselves are located).

The Office Action cites lines 36-43 in column 17 as supporting the position that these electrical components are known to have been located along the centerline. When read in the context of the *entire* paragraph, lines 36-50, however, it is clear that this paragraph is *not* disclosing the locating of all the electrical equipments themselves on or behind the dash panel (and none of the figures begins to suggest such component locations). Instead, in the very next sentence following the portion cited, Takayama suggests that nothing more is

contemplated than location of *controls* on the dash, away from the *remotely-located components* themselves:

In this case, the control unit may be arranged *at a position separated from* the panel body P while at least one of its display and console is arranged on the panel body P (such control unit is not coupled to the panel body P).”

Takayama at 17:43-47. Thus, Takayama does not teach the proposition for which it is cited, *i.e.*, the concentration of the listed electrical equipments *themselves* along the centerline.

Because Haynes Taurus Manual and Takayama, either alone or in combination, teach or suggest the present invention’s component concentration as recited in claim 1, and in particular do not suggest amended claim 1’s concentration of “the engine control computer, relay block, junction box, and ABS actuator” in the now narrowly defined central region of the vehicle, the Applicants respectfully submit that amended claim 1 and its dependent claims are patentable over these references under § 103(a). Accordingly, reconsideration and withdrawal of the pending rejections of claims 1 and 6-8 is respectfully requested. In addition, because the third reference cited in the rejection of dependent claims 2-5, Toshihiro, does not cure the defects of the combination of Haynes Taurus Manual and Takayama, the Applicants respectfully request the pending §103(a) rejection of these claims also be withdrawn.

Conclusion

In view of the foregoing amendment and remarks, it is respectfully submitted that claims 1-8 are presently in condition for allowance. The Applicants therefore earnestly solicit an early and favorable action on the merits and issuance of a Notice of Allowance for these claims.

The Examiner is invited to contact the undersigned at (202) 220-4232 to discuss any matter concerning this application.

The Office is authorized to charge any underpayment or credit any overpayment to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,



Mark H. Neblett
Registration No. 42,028

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KENYON & KENYON
1500 K Street, N.W., Suite 700
Washington, D.C. 20005-1247
(202) 220-4200 (telephone)
(202) 220-4201 (facsimile)

MARKED-UP VERSION OF AMENDMENTS

IN THE CLAIMS:

1. (Thrice amended) A structure in which a plurality of electrical equipments are arranged in a motor vehicle, comprising:

[at least two electrical equipments selected from] an engine control computer, a relay block, a junction box, and an ABS actuator[, and a meter unit]; and

a vehicle body with a longitudinal centerline that defines a space including a generally centralized region as viewed in a direction of the width of the vehicle, said region extending symmetrically from both sides of the centerline for a distance which is no more than one-half the distance, measured in a direction normal to the centerline, between the centerline and a longitudinal axis of a brake booster disposed within the vehicle body,

wherein [said at least two electrical equipments] the engine control computer, relay block, junction box, and ABS actuator are concentrated in said generally central region of the space defined by the vehicle body.